

**EXHIBIT A**

## **CURRICULUM VITAE**

## ANN MARIE SCHMIDT

|                   |  |
|-------------------|--|
| OFFICE ADDRESS    | Department of Surgery<br>Columbia University Medical Center<br>630 W. 168th Street<br>P&S 17-501<br>New York, N.Y. 10032 |
| HOME ADDRESS      | 242 Haven Road<br>Franklin Lakes, New Jersey 07417   |
| TELEPHONE NUMBERS | Work: (212) 305-6406<br>Home: (201) 405-0875<br>email: ams11@columbia.edu  |
| SOCIAL SECURITY # | 153-56-4871  |
| DATE OF BIRTH     | 2/18/57  |
| MARITAL STATUS    | Married, one child   |

## **EDUCATION**

| <u>University</u>   | <u>Degree/Field</u>                       | <u>Year</u> |
|---|---|-------------|
| New York University<br>Washington Square<br>School of the Arts & Sciences<br>New York, New York | B.A. Summa Cum Laude<br>Biology & History | 1979        |
| New York University<br>School of Medicine<br>New York, New York                                 | M.D. with Honors                          | 1983        |

## **AWARDS AND HONORS**

|                   |           |
|-------------------|-----------|
| Dean's List       | 1975-1979 |
| Phi Beta Kappa    | 1978      |
| Alpha Omega Alpha | 1982      |

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Exhibit A

Juvenile Diabetes Foundation Fellowship 1990-1992

Harold and Golden Lamport Prize 1998  
for Excellence in Clinical Research  
(Columbia University)

American Society of Clinical  
Investigation 1999

Established Investigator of the  
American Heart Association 1999

Recipient, Burroughs Wellcome Fund  
Clinical Scientist Award in  
Translational Research 1999

Schunk- Prize for Medicine 1999  
Justus-Liebig-University  
Gießen, Germany

Distinguished Lecturer 2000  
Department of Oral Biology  
State University of New York  
at Buffalo School of Dentistry

Co-director, Juvenile Diabetes 2000-2002  
Research Foundation International  
Center for Complications at  
Columbia University

Director, Juvenile Diabetes 2002-2003  
Research Foundation International  
Center for Complications at  
Columbia University

Keynote Lecturer, Banting and Best 2002  
Diabetes Centre Annual Scientific  
Day, University of Toronto,  
Toronto, Canada

Opponent in the Dissertation of the Degree 2002  
of Doctor of Philosophy by Henri Huttunen,  
Dept of Biochemistry, University of  
Helsinki, Helsinki, Finland

Mary Jane Kugel Award 2003  
Juvenile Diabetes Research  
Foundation International

Gerald and Janet Carrus  
Professor of Surgical Science

October, 2003

Director, Juvenile Diabetes  
Research Foundation International  
Center for Complications at  
Columbia University

2004-2006

**SPECIALTY BOARDS** Internal Medicine, American Board of Internal Medicine 1988

**LICENSURE** New York State Medical License  
Number: 159704

**PROFESSIONAL MEMBERSHIPS**

American Society of Hematology  
American Diabetes Association  
American Heart Association, Thrombosis Council  
American Society of Clinical Investigation  
Society for Neuroscience  
American Association for Cancer Research

**RESEARCH AND/OR PROFESSIONAL EXPERIENCE**

Intern, Internal Medicine, New York University Medical Center, Bellevue Hospital Center, July, 1983 - June, 1984.

Resident, Internal Medicine, New York University Medical Center, Bellevue Hospital Center, July, 1984 - June, 1987.

Chief Resident, Internal Medicine, New York University Medical Center, Bellevue Hospital Center, July, 1987- June, 1988.

Fellow, Hematology, New York University Medical Center, Bellevue Hospital Center, July, 1988 - June, 1989.

Fellow, Medical Oncology, New York University Medical Center, Bellevue Hospital Center, July, 1989 - June, 1990.

Teaching Assistant, Internal Medicine, New York University School of Medicine, New York, New York, 1983-1990.

Post-Doctoral Research Fellow, Columbia University, Department of Physiology and Cellular Biophysics, Laboratory of Dr. David Stern, July, 1990 - June, 1993.

Assistant Professor, Columbia University, Department of Medicine, Division of Molecular Medicine, July, 1993 - November, 1998.

Assistant Professor, Columbia University, Department of Surgery, January 1995- November 1998.

Associate Professor, Division of Surgical Science, Department of Surgery, with tenure, December 1, 1998 - June 30, 2003.

Division Chief, Division of Surgical Science, Department of Surgery, June, 2002 - present

Professor, Division of Surgical Science, Department of Surgery, July 1, 2003 - present

Gerald and Janet Carrus Professor of Surgical Science, October, 2003-present

**COMMITTEE MEMBERSHIPS, MEETING CHAIRMANSHIPS, AND PLENARY SESSIONS:**

1996 Co-chairperson: Session on "Featured Research - Oxidant Signaling and Gene Regulation", American Heart Association, National Meeting, New Orleans, Louisiana

1997 Co-chairperson: Session on Diabetes and Endothelial Dysfunction, Satellite Symposium of Diabetes and Atherosclerosis, Lyon, France

1997 Co-chairperson: Session on "Animal Models of Disease/Diabetes," American Heart Association, National Meeting, Orlando, Florida

1998 Co-chairperson: Session on "Diabetic Complications," American Diabetes Association, 58th Scientific Sessions, Chicago, Illinois

1999 Co-chairperson: Session on "Macrophage Activation and Scavenger Receptor Biology," Keystone conference, Inflammatory Paradigms and the Vasculature, Santa Fe, New Mexico

1999 Rapporteur, Session on "Vascular permeability in diabetes," Endothelial Cell Function in Diabetes Mellitus, The Wellcome Trust Genome Campus, Hinxton, Cambridgeshire, United Kingdom

1999 Chairperson, Session on "Emerging Mechanisms of Diabetic Complications," American Diabetes Association, 59th Scientific Sessions, San Diego, California

1999 Co-chairperson, NIH/NIDCR-sponsored workshop on Diabetes and Oral Health, Washington, D.C.

Session chair, NIH/NIDCR-sponsored workshop on Diabetes and Oral Health, "Diabetes and Wound Healing," Washington, D.C.

2000 Co-Chairperson, Session on "Mechanisms and Diabetes and Atherosclerosis," American Heart Association, National Meeting, New Orleans, Louisiana

2001 Co-Organizer, Physicians & Surgeons Biomedical Sciences Symposium, "Angiogenesis," Arden House, Harriman, New York, July, 2001 &

Session chair: Tumor Biology, Key Roles for Angiogenesis and Lymphangiogenesis

2001 Session chair, 6th EASD/JDRF Oxford Workshop on Molecular and Genetic Aspects of the Vascular Complications of Diabetes, session on Mechanisms of Vascular Disease, Keble College, Oxford, UK, August, 2001

2001 Co-Organizer, "The Diabetes Summit: A New Patient Treatment Regimen in Cardiovascular Disease", Anaheim, California, November, 2001

2002 Co-Chairperson, Annual Meeting of the American Heart Association, Session on Featured Research Session: Molecular Mechanisms in Atherosclerosis I; Subspecialty: Atherosclerosis/Hemostasis/Lipid Disorders, Chicago, Illinois, November, 2002.

2003 Discussion Leader, "How can we foster development of surrogate markers useful for clinical trials of potential new therapies?", Diabetes Mellitus Interagency Coordinating Committee, National Institutes of Health, Bethesda, Maryland

2003 Invited Participant, Working Group on the Cardiovascular Complications of Type 1 Diabetes, Sponsored by the Juvenile Diabetes Research Foundation International and the National Institutes of Health (NIDDK and NHLBI), Bethesda, Maryland

2003 Session chair, Adhesion Molecules and chemokines in atherogenesis, Workshop on Atherosclerosis: Molecular Basis of an Inflammatory Disease, Casteel Vaalsbroek, Vaals/Aachen, Germany

2003 Co-organizer, "Diabetic Complications: Progress through Animal Models," Sponsored by the National Institutes of Health (NIDDK, NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland

2003 Session chair & discussion leader, "The Translation Pipeline: from the bench to the bedside,"

"Diabetic Complications: Progress through Animal Models," Sponsored by the National Institutes of Health (NIDDK, NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland

2003 Co-Chairperson, Session on "Myocardial Ischemia-Associated Gene Expression," American Heart Association, National Meeting, Orlando, Florida

2004 Co-Chairperson, Session on "Inflammation & Tissue Injury," 12th International Congress of Immunology and 4th Annual Conference of FOCIS (Federation of Clinical Immunology Societies), Montreal, Canada

2004 Invited Participant, Diabetic Nephropathy Research Retreat, Sponsored by the National Institutes of Healthy and the American Society of Nephrology, Washington, D.C.

2005 Invited Participant, Meeting on the Special Statutory Funding Program for Type 1 Diabetes Research, Bethesda, Maryland

2005 Invited Participant, Meeting on Drug Screening for Hyperglycemic Cellular Injury, NIDDK/JDRF, Bethesda, Maryland

#### **EDITORIAL SERVICE**

1997 Associate (Guest) Editor, Journal of Gerontology

1998 Guest Editor, Investigative Ophthalmology and Visual Sciences

2003- Member, Editorial Board, Journal of Biological Chemistry

2004- Member, Editorial Board, Circulation

2004- Member, Editorial Board, Circulation Research

#### **REVIEW COMMITTEES**

1997 National Institutes of Health/National Institute of Dental Research, ad hoc reviewer, Special Emphasis Panel

1997 Wellcome Trust, London, England

1997 NIH/DRG: National Institutes of Aging, ad hoc reviewer

1998 NIH/DRG: National Institutes of Aging, ad hoc reviewer

1998 Special Review, University of Washington Diabetes Endocrinology Research Center (DERC) New Investigator Awards

1998 Reviewer, National Institutes of Health, Request for Applications: "Pathogenesis and Therapy of Diabetic Complications"

1998 Endocrine Fellows Foundation, ad hoc reviewer

1999 Reviewer, Special Emphasis Panel, Program Project Grant, National Institute of Dental and Craniofacial Research

1999 Reviewer, Special Emphasis Panel, Program Project Grants, Mechanisms of Vascular Disease, National Heart, Lung and Blood Institute

1999 NIH/DRG: National Institutes of Aging, ad hoc reviewer

1999 Juvenile Diabetes Foundation International, ad hoc reviewer

1999 Reviewer, Special Emphasis Panel, National Institutes of Health, Request for Applications: "Pilot studies for new therapies for type 1 diabetes and its complications"

1999 Member, Vascular Biology I Study Section, American Heart Association

2000 Member, NIH/DRG National Institutes of Aging: Biology of Aging - B

2000 National Institutes of Dental and Craniofacial Research, ad hoc reviewer

2000 Member, NIH Advisory Committee, Use of FY2001 Balanced Budget Act Funds for Type 1 Diabetes Research

2000-

2002 Member, Juvenile Diabetes Foundation International Medical Science Research Committee: Group III: Complications

2000 NIH/NIDDK/DRG: ad hoc reviewer

2001 Special Emphasis Panel (Chairperson), National Institute of Neurological Disorders and Stroke

2002 Ad hoc Member, Pathology A Study Section, Center for Scientific Review, National Institutes of Health

2002 Member, NIH/NIDDK Advisory Committee, Use of Special Congressional Funds for Type 1 Diabetes Research

2002 Reviewer, National Institutes of Aging, Site Visit and Review of Program Project Application

2002 Member, Ad hoc study section in response to a "Request for Applications," Bench to Bedside Therapy and Prevention of Diabetes and Its Complications, National Institutes of Health, NIDDK

2002-Chair, Biology of Aging Study Section, NIA-B  
2005

2003 Chair, Special Emphasis Panel, National Institutes of Health

2004 Special Emphasis Panel, National Institute of Diabetes and Digestive and Kidney Diseases, RFA DK-03-019 "Bench to Bedside Research on type 1 diabetes and its complications"

2004 Special Review Committee, National Heart Lung & Blood Institute, Program Project Application Review

#### BIBLIOGRAPHY

##### I. Peer-Reviewed.

1. Blum, R.H., Cooper, J., Schmidt, A.M., Ashinoff, R., Collins, A., Wernz, J.C., Speyer, J.L., Boyd, A., and Muggia, F.M. Cisplatin and Vinblastine chemotherapy for metastatic non-small cell carcinoma followed by radiation in patients with regional disease. *Cancer Treat. Rep.* 70:333-337, 1986.
2. Schmidt, A.M., Blum, R.H., Clayton, M., Speyer, J.L., Bottino, J., and Muggia, F.M. Phase II trial of cyclophosphamide and cis-platinum for non-small cell bronchogenic carcinoma. *Am. J. Clin Oncol.* 7:725-727, 1984.
3. Schmidt, A.M., Vianna, M., Gerlach, M., Brett, J., Ryan, J., Kao, J., Esposito, C., Hegarty, H., Hurley, W., Clauss, M., Wang, F., Pan, Y.C., Tsang, T.C., and Stern, D. Isolation and characterization of binding proteins for advanced glycosylation endproducts from lung tissue which are present on the endothelial cell surface. *J. Biol. Chem.* 267:14987-14997, 1992.
4. Nepper, M., Schmidt, A.M., Brett, J., Yan, S.D., Wang, F., Pan, Y.C., Elliston, K., Stern, D., and Shaw, A. Cloning and expression of RAGE: a cell surface receptor for advanced

glycosylation end products of proteins. J. Biol. Chem. 267: 14998-15004, 1992.

5. Shen, H., Clauss, M., Kao, J., Ryan, Schmidt, A.M., Tijburg, P., Border, L, and Stern, D. Characterization of vascular permeability factor/vascular endothelial growth factor receptors on mononuclear phagocytes. Blood 81:2767-2773, 1993.
6. Schmidt, A.M., Yan, S.D., Brett, J., Mora, R., and Stern, D. Regulation of mononuclear phagocyte migration by cell surface binding proteins for advanced glycosylation endproducts. J. Clin. Invest. 92:2155-2168, 1993.
7. Brett, J., Schmidt, A-M., Zou, Y-S., Yan, S-D., Weidman, E., Pinsky, D., Neper, M., Przysiecki, M., Shaw, A., Migheli, A., and Stern, D. Tissue distribution of the receptor for advanced glycation endproducts (RAGE): expression in smooth muscle, cardiac myocytes, and neural tissue in addition to the vasculature. Am. J. Pathol. 143:1699-1712, 1993.
8. Schmidt, A-M., Mora, R., Cao, R., Yan, S-D., Brett, J., Ramakrishnan, R., Tsang, T-C., Simionescu M., and Stern, D. The endothelial cell binding site for advanced glycation endproducts consists of a complex: an integral membrane protein and a lactoferrin-like polypeptide. J. Biol. Chem. 269:9882-9888, 1994.
9. Yan, S-D., Schmidt A-M., Anderson, G., Zhang, J., Brett, J., Zou, Y-S., Pinsky, D., and Stern, D. Enhanced cellular oxidant stress by the interaction of advanced glycation endproducts with their receptors/binding proteins. J. Biol. Chem. 269:9889-9897, 1994.
10. Schmidt, A-M., Hasu, M., Popov, D., Zhang, J-H., Yan, S-D., Brett, J., Cao, R., Kuwabara, K., Costache, G., Simionescu, N., Simionescu, M., and Stern, D. The receptor for Advanced Glycation Endproducts (AGES) has a central role in vessel wall interactions and gene activation in response to AGEs in the intravascular space. PNAS(USA) 91:8807-8811, 1994.
11. Wautier, J-L., M-P. Wautier, A-M. Schmidt, G. M. Anderson, C. Zoukourian, L. Capron, O. Chappey, S-D. Yan, J. Brett, P-J. Guillausseau, and D. Stern. Advanced glycation endproducts (AGES) on the surface of diabetic red cells bind to the vessel wall via a specific receptor inducing oxidant stress in the vasculature: a link between surface-associated AGEs and diabetic complications. PNAS(USA) 91:7742-7746, 1994

12. Yan, S-D., X. Chen, A-M. Schmidt, J. Brett, G. Godman, C.W. Scott, C. Caputo, T. Frappier, S-H. Yen, and D. Stern. The presence of glycated tau in Alzheimer's disease: a mechanism for induction of oxidant stress. PNAS(USA) 91:7787-7791, 1994.
13. Kuwabara, K., D. Pinsky, A-M. Schmidt, C. Benedict, J. Brett, S. Ogawa, M. Broekman, A. Marcus, R. Sciacca, M. Michalak, F. Wang, Y-C. Pan, S. Grunfeld, S. Patton, T. Malinski, D. Stern, and J. Ryan. Calreticulin, an antithrombotic agent which binds vitamin K-dependent coagulation factors, stimulates endothelial nitric oxide production, and limits thrombosis in canine coronary arteries. J. Biol. Chem. 270:8179-8187, 1995.
14. Ritthaler, U., Y.Deng, Y. Zhang, J. Greten, M. Abel, J. Allenberg, G. Otto, H. Roth, A. Bierhaus, R. Ziegler, A-M. Schmidt, R. Waldherr, P. Wahl, D. Stern, and P. Nawroth. Expression of receptors for advanced glycation endproducts in peripheral occlusive vascular disease. Am. J. Pathol. 146: 688-694, 1995.
15. Schmidt, A-M., O. Hori, J. Chen, J.F. Li, J. Crandall, J. Zhang, R. Cao, S.D. Yan, J. Brett and D. Stern. Advanced glycation endproducts interacting with their endothelial receptor induce expression of vascular cell adhesion molecule-1 (VCAM-1): a potential mechanism for the accelerated vasculopathy of diabetes. J. Clin. Invest. 96:1395-1403, 1995.
16. Hori, O., J. Brett, T. Slattery, R. Cao, J. Zhang, J. Chen, M. Nagashima, D. Nitecki, J. Morser, D. Stern, A.M. Schmidt. The Receptor for Advanced Glycation Endproducts (RAGE) is a cellular binding site for amphotericin: mediation of neurite outgrowth and co-expression of RAGE and amphotericin in the developing nervous system. J. Biol. Chem. 270:25752-25761, 1995.
17. Abel, M., Ritthaler, U., Zhang, Y., Deng, Y., Schmidt, A.M., Greten, J., Sernau, T., Wahl, P., Andrassy,K., Ritz, E., Stern, DM., and P. Nawroth. Expression of receptors for advanced glycosylated end products in renal disease. Nephrology, Dialysis, Transplantation 10:1662-1667, 1995.
18. Wautier, J-L., C. Zoukourian, O. Chappey, M-P. Wautier, P-J. Guillausseau, R. Cao, O. Hori, D. Stern, and A.M. Schmidt. Receptor-mediated endothelial cell dysfunction in diabetic vasculopathy: soluble receptor for advanced glycation endproducts blocks hyperpermeability. J. Clin. Invest. 97:238-243, 1996.
19. Schmidt, A.M., J. Crandall, R. Cao, O. Hori, and E. Lakatta. Elevated plasma levels of Vascular Cell Adhesion Molecule-1

(VCAM-1) in diabetic patients with microalbuminuria: a marker of vascular dysfunction and progressive vascular disease. *Brit. J. Hematol.* 92:747-750, 1996.

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21. Spanier, T., Oz, M., Levin, H., Weinberg, A., Moazami, N., Roberts, J.K., Mohr, J.P., Stern, D., Rose, E., and A.M. Schmidt. Activation of coagulation and fibrinolytic pathways in patients with Left Ventricular Assist Devices. *J. Thoracic and Cardiovascular Surgery*, 112:1090-1097, 1996.

22. Miyata, T., O. Hori, J.H. Zhang, S.D. Yan, L. Ferran, Y. Iida, and A.M. Schmidt. The Receptor for Advanced Glycation Endproducts (RAGE) mediates the interaction of AGE- $\beta_2$ -Microglobulin with human mononuclear phagocytes via an oxidant-sensitive pathway: implications for the pathogenesis of dialysis-related amyloidosis. *J. Clin. Invest.* 98:1088-1094, 1996.

23. Greten, J., Kreis, I., Wiesel, K., Stier, E., Schmidt, A.M., Stern, D.M., Ritz, E., Waldherr, R., and Nawroth, P.P. Receptors for Advanced Glycation Endproducts (AGEs) - expression by endothelial cells in non-diabetic uraemic patients. *Nephrology, Dialysis, Transplantation*. 11:786-790, 1996.

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25. Zoukourian, C., Wautier, M., Chappey, O., Dosquet, C., Rohban, T., Schmidt, A.M., Stern, D., and Wautier, J.L. Endothelial cell dysfunction secondary to the adhesion of diabetic erythrocytes. *International Andrology* 15:195-200, 1996.

26. Yan, S-D., Zhu, H., Fu, J., Yan, S-F., Roher, A., Tourtellotte, W., Rajavashisth, T., Chen, X., Stern, D. and Schmidt, A-M. Amyloid-beta peptide-RAGE interaction elicits neuronal expression of M-CSF: a proinflammatory pathway in Alzheimer's disease. *Proc. Natl. Acad. Sci.* 94:5296-5301, 1997.

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28. Li, J., and Schmidt, A.M. Characterization and functional analysis of the promoter of RAGE, the Receptor for Advanced Glycation Endproducts. *J. Biol. Chem.* 272:16498-16506, 1997.
29. Renard, C., Chappey, O., Wautier, M.P., Nagashima, M., Lundh, E., Morser, J., Zhao, L., Schmidt, A.M., Scherrmann, J.M., and Wautier, J.L. Recombinant Advanced Glycation Endproduct Receptor pharmacokinetics in normal and diabetic rats. *Molecular Pharmacology* 52:54-62, 1997.
30. Spanier, T., Oz, M.C., Minanov, O.P., Simantov, R., Kisiel, W., Stern, D.M., Rose, E.A., and Schmidt, A.M. Heparinless cardiopulmonary bypass using active-site blocked Factor IXa: a preliminary study on the dog. In press, *J. Cardiovascular & Thoracic Surgery*, 1997.
31. Spanier, T., Oz, M., Minanov, O., Stern, D., Rose, E., and Schmidt, A.M. Active site-blocked Factor Ixa: a novel selective anticoagulant for use in cardiopulmonary bypass. *Surgical Forum* XLVIII:259-261, 1997.
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34. Lalla, E., Lamster, I.B., Feit, M., Huang, L., and Schmidt, A.M. A murine model of accelerated periodontal disease in diabetes. *Journal of Periodontal Research* 33:387-399, 1998.
35. Hofmann, M.A., Kohl, B., Zumbach, M.S., Borcea, V., Bierhaus, A., Henkels, M., Amiral, J., Schmidt, A.M., Fiehn, W., Ziegler, R., Wahl, P., and Nawroth, P.P. Hyperhomocyst(e)inemia and endothelial dysfunction in IDDM. *Diabetes Care* 21:841-848, 1998.
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resistance in the JCR:LA-cp rat. *Atherosclerosis* 138:135-146, 1998.

37. Park, L., Raman, K.G., Lee, K.J., Yan, L., Ferran, L.J., Chow, W.S., Stern, D., and Schmidt, A.M. Suppression of accelerated diabetic atherosclerosis by soluble Receptor for AGE (sRAGE). *Nature Medicine* 4:1025-1031, 1998.

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43. Hofmann, M.A., Drury, S., Fu, C., Qu, W., Taguchi, A., Lu, Y., Avila, C., Kambham, N., Bierhaus, A., Nawroth, P., Neurath, M.F., Slattery, T., Beach, D., McClary, J., Nagashima, M., Morser, J., Stern, D., and Schmidt, A.M. RAGE mediates a novel proinflammatory axis: a central cell surface receptor for S100/calgranulin polypeptides. *Cell* 97:889-901, 1999.

44. Spanier, T.B., Chen, J.M., Oz, M.C., Stern, D.M., Rose, E.A., and Schmidt, A.M. Time- dependent cellular population of

textured-surface left ventricular assist devices contributes to the development of a biphasic systemic procoagulant response. *J. Thorac. Cardiovasc. Surg.* 118:404-413, 1999.

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48. Barile, G.R., Chang, S.S., Park, L.S., Reppucci, V.S., Schiff, W.M., and Schmidt, A.M. Soluble cellular adhesion molecules in proliferative vitreoretinopathy and proliferative diabetic retinopathy. *Current Eye Research* 19: 219-227, 1999.

49. Lalla, E., Lamster, I.B., Feit, M., Huang, L., Spessot, A., Qu, W., Kislinger, T., Lu, Y., Stern, D.M., and Schmidt, A.M. Blockade of RAGE suppresses periodontitis-associated alveolar bone loss in diabetic mice. *J. Clin. Invest.* 105:1117-1124, 2000.

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## II. Invited Articles/Chapters

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#### INVITED PRESENTATIONS

1. "Endothelial cell and mononuclear phagocyte receptors for advanced glycation endproducts," Gordon Research Conference, Vascular Biology, Colby Sawyer, New Hampshire, 1992.
2. "Cellular receptors for advanced glycation endproducts," American Heart Association Meeting, Mini-Symposium in Thrombosis and Hemostasis, New Orleans, Louisiana, 1992.
3. "Cellular receptors for advanced glycation endproducts: implication for endothelial and monocyte dysfunction in the pathogenesis of vascular lesions," Atherosclerosis Symposium, University of Regensburg, Germany, 1993.
4. "Cellular receptors for glycated proteins: implications for vascular dysfunction in atherosclerosis and diabetes," FASEB meeting, New Orleans, Louisiana, 1993.

5. "Cellular receptors for advanced glycosylation endproducts: implications for vascular disease in diabetes," Scientific Conference on the Molecular Biology of the Vascular Wall, American Heart Association, Boston, Massachusetts, 1993.
6. "Cellular receptors for advanced glycation endproducts: implications for vascular disease in atherosclerosis and diabetes," Research Seminar, National Institutes of Aging, National Institutes of Health, Baltimore, Maryland, March, 1994.
7. "Cellular receptors for advanced glycation endproducts: implications for vascular dysfunction in atherosclerosis and diabetes," Grand Rounds, Department of Medicine, Columbia University College of Physicians and Surgeons, New York, New York, March, 1994.
8. "Atherosclerosis, aging and diabetes: common mechanisms, "Minisymposium on Vascular Permeability, FASEB, Anaheim, California, April 1994.
9. "Glycated proteins and their receptors in vascular disease," Grand Rounds, Department of Cardiology, UCLA School of Medicine, Los Angeles, California, April 1994.
10. "Advanced Glycation Endproducts and their cellular receptor: implications for diabetic vascular disease, Endocrinology Grand Rounds, Department of Medicine, Columbia University College of Physicians and Surgeons, New York, New York, January, 1996.
11. "AGE-receptor interaction: implications for accelerated atherosclerosis observed in diabetes, Cardiology Grand Rounds, Department of Medicine, New York University School of Medicine, New York, New York, February, 1996.
12. "AGE-RAGE cellular interaction: implications for the development of diabetic complications," Nephrology Grand Rounds, Department of Medicine, Downstate Medical Center, Brooklyn, New York, May, 1996.
13. "RAGE in atherosclerosis and Alzheimer's disease," Clinical Research Seminars, Rockefeller University, New York, New York, June, 1996.
14. "RAGE: implications for complications of diabetes," Grand Rounds, Department of Medicine, Division of Nephrology, North Shore University Hospital, Manhasset, New York, September, 1996.

15. "AGE-RAGE interaction: implications for the development of diabetic complications," Grand Rounds, Department of Pediatrics, Columbia University College of Physicians and Surgeons, New York, New York, October, 1996.
16. "The receptor for advanced glycation endproducts: implications for the pathogenesis of diabetic complications," Scientific congress on the vascular endothelium: basic and clinical aspects, Pisa, Italy, November, 1996.
17. "Receptor for AGE, RAGE: implications for the biology of aging," National Institutes of Aging and the Glenn Foundation workshop on "Molecular aspects of age-related cardiovascular decline," Montecito, California, January, 1997.
18. "Interaction of Advanced Glycation Endproducts (AGES) with their cellular receptor RAGE: implications for vascular and inflammatory cell dysfunction in diabetes," Symposium of the Baker Medical Research Institute on "Atherosclerosis and the Vessel Wall," Melbourne, Australia, February, 1997.
19. "Prevention of diabetic complications," 10th annual congress, Mexican Diabetes Federation, Aguascalientes, Mexico, March, 1997.
20. "Advanced Glycation Endproducts (AGES) in diabetic periodontal disease," Sunstar Chapel Hill Symposium, Periodontal diseases and human health, Chapel Hill, North Carolina, March, 1997.
21. "RAGE and diabetic atherosclerosis," Annual Scholar's Day Program, Council for Tobacco Research, New York, New York, April, 1997.
22. "RAGE and the pathogenesis of diabetic complications," Seminar, Center for Transgene Technology and Gene Therapy, Leuven, Belgium, May, 1997.
23. "Interaction of glycated proteins with the vessel wall: implications for the pathogenesis of accelerated atherosclerosis in diabetes," 29th annual Hugh Lofland Conference on atherogenesis and the vessel wall, Honolulu, Hawaii, June, 1997.
24. "AGES and RAGE: implications for the pathogenesis of diabetic complications," Invited speaker, Symposium on Endothelial Dysfunction in Diabetes, annual meeting, American Diabetes Association, Boston, Massachusetts, June, 1997.
25. "Interaction of Advanced Glycation Endproducts (AGES) with their receptor RAGE: implications for the biology of aging,"

1997 World Congress of Gerontology, 16th Congress of the International Association of Gerontology, Adelaide, Australia, August, 1997.

26. "RAGE and vascular cell dysfunction," Juvenile Diabetes Foundation and European Association for the Study of Diabetes: Workshop on Diabetic Retinopathy, Oxford, England, September, 1997.
27. "Advanced Glycation Endproducts and RAGE: Implications for enhanced oxidant stress in the pathogenesis of complications in diabetes and beyond," 4th Kobe Study Group of Vascular Medicine: Cross Talk between NO and Oxygen Radicals, Kobe, Japan, September, 1997.
28. "Interaction of Advanced Glycation Endproducts with their cellular receptor RAGE: implications for the pathogenesis of complications in diabetes and beyond," Center for Blood Research, Harvard University, Boston, Massachusetts, September, 1997.
29. "Interaction of advanced glycation endproducts with their cellular receptors," Symposium, Diabetes and Endothelial Dysfunction, Lyon, France, October, 1997.
30. "AGEs and RAGE: Implications for the pathogenesis of diabetic complications," Grand Rounds, Department of Medicine, New York University School of Medicine, New York, New York, October, 1997.
31. "Selective Anti-thrombotic therapy without interfering with protective hemostasis: role of Factor IX/IXa," Frontiers in Translational and Clinical Research: Anti-Coagulation: Present and Future, Columbia University College of Physicians and Surgeons, New York, New York, November, 1997.
32. "AGEs and RAGE: Implications for the pathogenesis of complications in diabetes and beyond," Seminar, Department of Physiology and Cellular Biophysics, Columbia University College of Physicians and Surgeons, New York, New York, November, 1997
33. "AGEs and RAGE: Implications for the pathogenesis of complications in diabetes, atherosclerosis and beyond," Seminar, Novartis, Summit, New Jersey, December, 1997
34. "RAGE: A novel target for the therapy of complications in diabetes and beyond," Invited Scholar lecture, Department of Dermatology, Columbia University College of Physicians and Surgeons, New York, New York, January, 1998.

35. "AGES and RAGE: Implications for vascular complications in diabetes," Keystone symposium on the Endothelium, Lake Tahoe, Nevada, March, 1998.
36. "Receptor for AGE: Implications for the pathogenesis of complications in diabetes," Diabetes Research Seminar, Case Western University School of Medicine, Cleveland, Ohio, May, 1998.
37. "Receptor for Advanced Glycation Endproducts (AGE) and implications for the pathogenesis of diabetic complications ", New York/New Jersey Molecular Biology Club, New Jersey Medical School, Newark, New Jersey, May, 1998.
38. "Active site-blocked Factor IXa in Cardiac Surgery," Cambridge Healthech Institute symposium on novel anticoagulants, San Diego, California, May, 1998.
39. "Receptor for AGE (RAGE): Novel insights into Diabetes and Inflammation," Department of Pediatrics Grand Rounds, Columbia University College of Physicians and Surgeons, August, 1998.
40. "RAGE and the pathogenesis of vascular complications in diabetes," Xth International Vascular Biology meeting, Cairns, Australia, August, 1998.
41. "Heparin and its alternatives," Annual meeting, Extracorporeal Life Support Organization, San Antonio, Texas, September, 1998.
42. "Suppression of accelerated diabetic atherosclerosis by soluble RAGE (sRAGE)," The Vascular Endothelium: Basic and Clinical Aspects, Second International Congress, Pisa, Italy, October, 1998.
43. "AGE receptors and oxidative stress," Diabetic Complications Conference, Joint Symposium in celebration of the Joslin Diabetes Center's 100th anniversary, Boston, Massachusetts, October, 1998.
44. "Receptor for AGE, RAGE: Implications for chronic complications in diabetes and inflammation," Whitaker Cardiovascular Institute Seminar, Boston University School of Medicine, Boston, Massachusetts, January, 1999.
45. "Receptor for AGE (RAGE): "Novel Proinflammatory Ligands and Insights into Inflammation," Keystone Conference, Inflammatory Paradigms and the Vasculature, Santa Fe, New Mexico, February, 1999

46. "RAGE and implications for chronic complications in diabetes and inflammation," Bergen Community Regional Blood Center, Paramus, N.J., March, 1999.
47. "Receptor for AGE: implications for the pathogenesis of complications in diabetes and inflammation," New York Metro Pediatric Endocrine Society, N.Y., N.Y., April, 1999.
48. "Advanced Glycation Endproducts and atherosclerosis," FASEB summer conference on Thrombin and Vascular Medicine, Saxton River, Vermont, June, 1999.
49. "Receptor for AGE (RAGE): Implications for Vascular and Inflammatory Dysfunction in Diabetes and other Disorders," Gordon Research Conference on "Angiogenesis and Microcirculation," Salve Regina University, Newport, Rhode Island, August, 1999.
50. "Vascular and endothelial dysfunction in diabetes," Plenary session, The Fourth International Diabetes Federation, Western Pacific Region Congress, Sydney, Australia, August, 1999.
51. "Markers of vascular and endothelial dysfunction in diabetes, " "Meet the Professor session," The Fourth International Diabetes Federation, Western Pacific Region Congress, Sydney, Australia, August, 1999.
52. "Present status of the AGE receptors: RAGE and future developments," ENGAGE meeting," European Association for the Study of Diabetes, Brussels, Belgium, September, 1999.
53. "Receptor for AGE (RAGE): Implications for chronic cellular dysfunction in diabetes, inflammation and tumor biology," Grand Rounds, Division of Rheumatology, Department of Medicine, New York University School of Medicine, October, 1999.
54. "The Molecular Pathogenesis of Diabetic Complications," Frontiers in Diabetes Research, The Naomi Berrie Diabetes Center, Columbia University, New York, New York, November, 1999.
55. "Role of Advanced Glycation End-products in the clinical complications of diabetes," Jubilee symposium in honour of Professor Bernard Jacotot, The French Atherosclerosis Society, Paris, France, November, 1999.

56. "Advanced Glycation Endproducts and their receptors," NIH/NIDCR-sponsored workshop on Diabetes and Oral Health, Washington, D.C., December, 1999.
57. "Advanced Glycation Endproducts and their Receptor RAGE: Implications for the pathogenesis of complications in diabetes, inflammation, Alzheimer's disease and cancer," Institute for Biochemistry, Justus-Liebig-University, Gießen, Germany, December, 1999.
58. "AGE-RAGE interaction: implications for the development of diabetic vasculopathy," Renal Grand Rounds, The New York Hospital Medical Center of Queens, "Queens, New York, March, 2000.
59. "Receptor for Advanced Glycation Endproducts (RAGE) and implications for diabetic complications, inflammation and tumor biology," Lung Biology Conference, Division of Pulmonary Medicine, Department of Medicine, Yale University School of Medicine, New Haven, Connecticut, March, 2000.
60. "Receptor for AGE (RAGE) is a gene within the major histocompatibility class III region: implications for host response mechanisms in homeostasis and chronic diseases," Immunology Seminar Program, College of Biological Sciences, Ohio State University School of Medicine, April, 2000.
61. "Receptor for AGE (RAGE) and implications for the pathogenesis of diabetic complications, inflammation and cancer," Distinguished Lecture, Department of Oral Biology, State University of New York at Buffalo School of Dentistry, Buffalo, New York, May, 2000.
62. "Receptor for AGE (RAGE) and implications for the pathogenesis of diabetic complications and inflammation," German Diabetes Association, Munich, Germany, May, 2000.
63. "Receptor for AGE: a multiligand receptor of the immunoglobulin superfamily with implications for the pathogenesis of diabetic complications and other disorders," Current Topics in Glycobiology, Helsinki, Finland, June, 2000.
64. "Blockade of RAGE, a New Approach to the Treatment of the Complications of Diabetes," Juvenile Diabetes Research Foundation, New York, New York, October, 2000.
65. "RAGE: updates on tumor biology and inflammation paradigms," Department of Medicine, Faculty Research Seminar, Columbia University, New York, New York, December, 2000.

66. "RAGE - a multiligand tale," Seminar, Naomi Berrie Diabetes Center, Columbia University, New York, New York, December, 2000.
67. "RAGE and peripheral nerve repair," Keystone Symposium on Neuronal and Vascular Stress: a New Window on Alzheimer's Disease, Durango, Colorado, January, 2001.
68. "RAGING against the complications of diabetes," Juvenile Diabetes Research Foundation International, Meeting of the Board of Directors, Tampa, Florida, February, 2001.
69. "RAGE and the complications of diabetes and inflammation," Seminar, Boston University Goldman School of Dental Medicine, Boston, Massachusetts, April, 2001.
70. "The Role of Advanced Glycation Endproducts (AGE) and their receptor RAGE in Diabetes, The Periodontal-Systemic Connection: A State of the Art Symposium, Sponsored by the NIDCR and the AAP, Bethesda, Maryland, April, 2001.
71. "RAGE: Updates on the Amyloidoses and Inflammation," Seminar, Department of Molecular Medicine, Weill-Cornell University Medical College, New York, New York, April, 2001.
72. "RAGE and the complications of diabetes: inflammatory overtones," 6th EASD/JDRF Oxford Workshop on the Molecular and Genetic Aspects of the Vascular Complications of Diabetes, Keble College, Oxford, UK, August, 2001.
73. "The Current RAGE of Diabetes," The Diabetes Summit: A New Patient Treatment Regimen in Cardiovascular Disease, Anaheim, California, November, 2001.
74. "RAGE and the Complications of Diabetes - Insights into Proinflammatory Mechanisms," Invited Speaker, Meeting of the Oral Biology, Immunology and Microbiology Research Group, Longboat Key, Florida, January, 2002.
75. "RAGE: Implications for Diabetic Complications and Beyond," Biochemical Pharmacology Discussion Group, New York Academy of Sciences, New York, New York, January, 2002.
76. "RAGE and the complications of diabetes and inflammation," Seminar, Department of Clinical Pharmacology, Department of Medicine, New York University School of Medicine, March, 2002.
77. "RAGE: insights into proinflammatory mechanisms in diabetes and immune/inflammatory disorders," Keystone Symposium,

"Inflammatory Paradigms and the Vasculature II," Steamboat Springs, Colorado, April, 2002.

78. "RAGE: insights into the pathogenesis of diabetic complications and beyond," Grand Rounds, Department of Medicine, College of Physicians & Surgeons, Columbia University, New York, New York, April, 2002.

79. "RAGE and the complications of diabetes," Keynote Lecture, Banting and Best Diabetes Centre Annual Scientific Day, University of Toronto, Toronto, Canada, May, 2002.

80. "RAGE blockade and implications for the treatment of diabetic complications, inflammation, neurodegenerative disorders and cancer: a quest for clinical translation," Grand Rounds, Department of Surgery, College of Physicians & Surgeons, Columbia University, New York, New York, June, 2002.

81. "AGE, RAGE and Animal Models of Diabetic Complications," Invited Speaker, Animal Models of Diabetic Complications, National Institutes of Diabetes, Digestive and Kidney Disease, Arlington, Virginia, August, 2002.

82. "Receptor for AGE (RAGE) and Implications for Diabetic Complications, Tumors and Beyond," Department of Medicine, Grand Rounds, University of Vermont, October, 2002.

83. "Receptor for AGE (RAGE): a quest for clinical translation," Seminars in Investigative Medicine, University of Vermont, October, 2002.

84. "Receptor for AGE (RAGE): Implications for Diabetic Complications, Tumors and Beyond, Seminar, Department of Biochemistry, University of Helsinki, Helsinki, Finland, October, 2002.

85. "Diabetic Vascular Oxidant Stress," Invited Presentation, Session on Molecular Mechanisms of Atherosclerotic Vascular Disease in type 2 Diabetes," Annual meeting of the American Heart Association, Chicago, Illinois, November, 2002.

86. "RAGE and the Vascular Complications of Diabetes," Invited Speaker, Alfédiam (Association de Langue Francaise Pour L'Etude Du Diabète Et Des Maladies Métaboliques): Meeting on "Atherosclere et Diabète: Acquis et Défis", Pasteur Institute, Paris, France, December, 2002.

87. "RAGE, diabetes and the inflammatory response," Seminar, Division of Rheumatology, Department of Medicine, College of

Physicians & Surgeons, Columbia University, New York, New York, December, 2002.

88. "RAGE and the complications of diabetes and beyond," Seminar, Department of Microbiology and Immunology, University of Western Ontario, Ontario, Canada, January, 2003.
89. "RAGE and the complications of diabetes," Seminar, Naomi Berrie Diabetes Center, College of Physicians & Surgeons, Columbia University, New York, New York, February, 2003.
90. "Understanding Diabetes- It's All in the RAGE," Myocardial Reperfusion XVI: Concepts and Controversies," American College of Cardiology, Chicago, Illinois, March, 2003.
91. "RAGE-dependent mechanisms and metabolic imprinting in the pathogenesis of diabetic complications," 20th Anniversary Symposium, Metabolic Imprinting and the Long-Term Complications of Diabetes Mellitus: Bench to Bedside and Back, National Institutes of Health, Bethesda, Maryland, April, 2003.
92. "RAGE and the Complications of Diabetes," Seminar, Diabetes Research Center, Albert Einstein College of Einstein, Bronx, New York, April, 2003.
93. "RAGE and the complications of diabetes and inflammation," Invited Speaker, Symposium on "Evolving Epidemic of Diabetes and Vascular Disease," University of Virginia, Charlottesville, Virginia, May, 2003.
94. "RAGEing against the complications of diabetes," Invited speaker, Annual meeting of the Northern New Jersey/Rockland County Chapter of the Juvenile Diabetes Foundation International," Tenafly, New Jersey, June, 2003.
95. "RAGE and amplification of proinflammatory pathways in the immune response," Invited Speaker, Arthritis Research Conference, Arthritis Foundation, Keystone, Colorado, June, 2003.
96. "Insights into Pathogenic Mechanisms in Diabetic Atherosclerosis and Cardiac Dysfunction," 8th European Association for the Study of Diabetes/Juvenile Diabetes Research Foundation Oxford Workshop, Keble College, Oxford, United Kingdom, August, 2003.
97. "RAGE and vascular inflammation: insights into the vascular complications of diabetes," Workshop on Atherosclerosis-

Molecular Basis of an Inflammatory Disease, Casteel Vaalsbroek, Vaals/Aachen, Germany, September, 2003.

98. "RAGE: Moving to the Clinic for the Cardiovascular Complications of Diabetes," Workshop entitled: "Diabetic Complications: Progress through Animal Models," Sponsored by the National Institutes of Health (NIDDK, NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland, October, 2003.
99. "Systemic Markers of Inflammation," Invited Speaker, Type 2 Diabetes, the Metabolic Syndrome and Obesity: Evolving the Paradigms, Mc Lean, Virginia, January, 2004.
100. "Interaction between aldose reductase and RAGE-AGE pathways in diabetic myocardium," Invited Speaker, International Polyol Pathway Conference, Kona, Hawaii, March, 2004.
101. "RAGING against the complications of diabetes: new directions and future therapies," Invited Speaker, International Polyol Pathway Conference, Kona, Hawaii, March, 2004.
102. "RAGE and the Complications of Diabetes and Beyond: Inflammation, Tumors and Innate Functions," Department of Biology Seminar, New York University, New York, New York, March, 2004.
103. "AGES and RAGE as Therapeutic Targets in Diabetes," Invited Speaker, American Society of Hypertension, New York, New York, May, 2004.
104. "RAGE and the cardiovascular complications of diabetes," Grand Rounds, Division of Cardiology, Department of Medicine, Albert Einstein College of Medicine, Bronx, New York, May, 2004.
105. "All the RAGE," Invited Speaker, Session on Mechanisms of Vascular Wall Damage, 64th annual sessions of the American Diabetes Association, Orlando, Florida, June, 2004.
106. "RAGE: The Complications of Diabetes and Neurodegenerative Disorders: Mechanisms & Therapeutic Strategies," Grand Rounds, Invited Speaker, Department of Neurology, Columbia University Medical Center, New York, New York, June, 2004.
107. "Receptor for AGE (RAGE) is a multiligand receptor of the immunoglobulin superfamily: implications for modulation of the inflammatory response," Session on "Inflammation & Tissue Injury," 12th International Congress of Immunology and 4th Annual Conference of FOCIS (Federation of Clinical Immunology Societies), Montreal, Canada, July, 2004.

108. "Receptor for AGE (RAGE): a multiligand receptor of the immunoglobulin superfamily- implications for the pathogenesis of diabetic complications," Invited Speaker, Plenary Session, 8th International Symposium on the Maillard Reaction," Charleston, South Carolina, August, 2004.
109. "Receptor for Advanced Glycation Endproducts: Insights into the pathogenesis of diabetic complications," 5th Annual Rachmiel Levine Symposium: Advances in Diabetes Research-From Cell Biology to Cell Therapy, Los Angeles, California, October, 2004.
110. "RAGE Blockade: From Mice to Man- moving to the clinic," Advances in Translational Research, Columbia University Medical Center New York Presbyterian Hospital and the Science Office of the Embassy of Italy, New York, New York, October, 2004.
111. "RAGE: Diabetic Complications and the Inflammatory Response," Society for Biomaterials: "Biomaterials in Regenerative Medicine: The Advent of Combination Products," Philadelphia, Pennsylvania, October, 2004.
112. "AGE, RAGE & Diabetic Complications," The Pfizer Carousel of Hope Diabetes Symposium on "Inflammation: Cause And Consequence of Diabetes and Vascular Complications," Beverly Hills, California, October, 2004.
113. "RAGE: Implications for Diabetic Complications, Inflammation, Neurodegeneration and Tumors," Biogen, Inc., Boston, Massachusetts, November, 2004.
114. "RAGE & the Cardiovascular Complications of Diabetes," Invited Speaker, Session on Diabetes and Cardiovascular Disease, Annual Meeting of the American Heart Association, November, 2004.
115. "Glycation, Inflammation and the Complications of Diabetes: The RAGE Connection," Endocrinology Canada International Symposium, The Science of Diabetes Complications, Implications for Novel Therapy, Toronto, Canada, November, 2004.
116. "RAGE & the Complications of Diabetes, Inflammation and Cancer," Department of Anesthesia Case Conference and Guest Lecture Series, Columbia University, New York, New York, January, 2005.